

What is claimed is:

- 1 1. A method of efficiently serving objects in a computing network, comprising steps of:  
2 receiving a request for an object stored on network-attached storage ("NAS"); and  
3 evaluating predetermined criteria to see if the stored object should be served from the  
4 NAS through a recipient of the received request.
- 1 2. The method according to Claim 1, wherein the evaluating step further comprises steps of:  
2 serving the stored object through the recipient of the received request when the selected  
3 criteria are not met; and  
4 informing a sender of the received request that a subsequent connection should be  
5 established for serving the stored object when the selected criteria are met.
- 1 3. The method according to Claim 2, wherein the subsequent connection bypasses the  
2 recipient of the received request.
- 1 4. The method according to Claim 2, wherein the informing step uses a redirect code of an  
2 existing protocol.
- 1 5. The method according to Claim 4, wherein the existing protocol is Hypertext Transfer  
2 Protocol.
- 1 6. The method according to Claim 4, wherein the existing protocol is Wireless Session

2 Protocol.

1 7. The method according to Claim 4, wherein receipt of the redirect code by the sender of  
2 the received request automatically causes the sender to request establishment of the subsequent  
3 connection.

1 8. The method according to Claim 1, wherein the predetermined criteria include a size of the  
2 stored object.

1 9. The method according to Claim 8, wherein evaluating the predetermined criteria  
2 comprises comparing the size of the stored object to a statically-specified number.

1 10. The method according to Claim 9, wherein the statically-specified number is specified by  
2 an administrator using a configuration interface.

1 11. The method according to Claim 8, wherein evaluating the predetermined criteria  
2 comprises comparing the size of the stored object to a dynamically-determined number.

1 12. The method according to Claim 11, wherein the dynamically-determined number is  
2 determined in view of current network conditions.

1 13. The method according to Claim 1, wherein the predetermined criteria include a naming

extension of the stored object.

14. The method according to Claim 13, wherein evaluating the predetermined criteria comprises determining whether the naming extension matches an element in a statically-specified set of naming extensions.

15. The method according to Claim 14, wherein the statically-specified set of naming extensions is specified by an administrator using a configuration interface.

16. The method according to Claim 13, wherein evaluating the predetermined criteria comprises determining whether the naming extension matches an element in a set of dynamically-determined set of naming extensions.

17. The method according to Claim 16, wherein the dynamically-determined set of naming extensions is determined in view of current network conditions.

18. The method according to Claim 1, wherein the predetermined criteria include a name of the stored object.

19. The method according to Claim 18, wherein evaluating the predetermined criteria comprises determining whether the object name matches an element in a statically-specified set of object names.

1 20. The method according to Claim 19, wherein the statically-specified set of object names is  
2 specified by an administrator using a configuration interface.

1 21. The method according to Claim 18, wherein evaluating the predetermined criteria  
2 comprises determining whether the object name matches an element in a set of dynamically-  
3 determined set of object names.

1 22. The method according to Claim 21, wherein the dynamically-determined set of object  
2 names is determined in view of current network conditions.

1 23. The method according to Claim 1, wherein the predetermined criteria include a content  
2 type of the stored object.

1 24. The method according to Claim 23, wherein evaluating the predetermined criteria  
2 comprises determining whether the content type matches an element in a statically-specified set of  
3 content types.

1 25. The method according to Claim 24, wherein the statically-specified set of content types is  
2 specified by an administrator using a configuration interface.

1 26. The method according to Claim 23, wherein evaluating the predetermined criteria

comprises determining whether the content type matches an element in a set of dynamically-determined set of content types.

27. The method according to Claim 26, wherein the dynamically-determined set of content types is determined in view of current network conditions.

28. The method according to Claim 1, wherein the predetermined criteria includes use of one or more wildcards which may operate to match more than one stored object.

29. A method of deploying objects to improve efficiency of serving large objects in network computing environments which include network-attached storage ("NAS"), comprising steps of:

- receiving a deployment request for a particular object;
- deploying the particular object on the NAS;
- evaluating characteristics of the particular object;
- creating a redirect link on one or more servers from which the particular object may be requested, if the evaluated characteristics of the particular object meet predetermined criteria; and
- creating an object serving link on the one or more servers if the evaluated characteristics of the particular object do not meet the predetermined criteria.

30. The method according to Claim 29, wherein the redirect link enables returning a redirect status code to a requester of the object.

1 31. The method according to Claim 30, wherein receiving the redirect status code causes the  
2 requester of the object to automatically request establishment of a subsequent connection for  
3 retrieving the particular object directly from the NAS.

1 32. The method according to Claim 30, wherein contents of the redirect link are  
2 programmatically created.

1 33. The method according to Claim 30, wherein contents of the redirect link are manually  
2 created.

1 34. A method of efficiently serving large objects in network computing environments which  
2 include network-attached storage ("NAS"), comprising steps of:  
3 receiving a deployment request for a particular object;  
4 deploying the particular object on the NAS;  
5 creating a redirect link on one or more servers from which the particular object may be  
6 requested;  
7 creating an object serving link on the one or more servers; and  
8 delaying until run-time a decision on whether to serve the particular object directly from  
9 the NAS using the redirect link or through a selected one of the servers using the object serving  
10 link.

1 35. A system for efficiently serving objects in a computing network, comprising:

2 means for receiving a request for an object stored on network-attached storage ("NAS");  
3 and  
4 means for evaluating predetermined criteria to see if the stored object should be served  
5 from the NAS through a recipient of the received request.

1 36. The system according to Claim 35, wherein the means for evaluating further comprises:  
2 means for serving the stored object through the recipient of the received request when the  
3 selected criteria are not met; and  
4 means for informing a sender of the received request that a subsequent connection should  
5 be established for serving the stored object when the selected criteria are met.

1 37. The system according to Claim 36, wherein the subsequent connection bypasses the  
2 recipient of the received request.

1 38. The system according to Claim 36, wherein the means for informing uses a redirect code  
2 of an existing protocol, and wherein receipt of the redirect code by the sender of the received  
3 request automatically causes the sender to request establishment of the subsequent connection.

1 39. A system for deploying objects to improve efficiency of serving large objects in network  
2 computing environments which include network-attached storage ("NAS"), comprising:  
3 means for receiving a deployment request for a particular object;  
4 means for deploying the particular object on the NAS;

5 means for evaluating characteristics of the particular object;

6 means for creating a redirect link on one or more servers from which the particular object  
7 may be requested, if the evaluated characteristics of the particular object meet predetermined  
8 criteria; and

9 means for creating an object serving link on the one or more servers if the evaluated  
10 characteristics of the particular object do not meet the predetermined criteria.

1 40. A computer program product for efficiently serving objects in a computing network, the  
2 computer program product embodied on one or more computer-readable media and comprising:

3 computer readable program code means for receiving a request for an object stored on  
4 network-attached storage ("NAS"); and

5 computer readable program code means for evaluating predetermined criteria to see if the  
6 stored object should be served from the NAS through a recipient of the received request.

1 41. The computer program product according to Claim 40, wherein the computer readable  
2 program code means for evaluating further comprises:

3 computer readable program code means for serving the stored object through the recipient  
4 of the received request when the selected criteria are not met; and

5 computer readable program code means for informing a sender of the received request  
6 that a subsequent connection should be established for serving the stored object when the selected  
7 criteria are met.



1 42. The computer program product according to Claim 41, wherein the subsequent  
2 connection bypasses the recipient of the received request.

1 43. The computer program product according to Claim 41, wherein the computer readable  
2 program code means for informing uses a redirect code of an existing protocol, and wherein  
3 receipt of the redirect code by the sender of the received request automatically causes the sender  
4 to request establishment of the subsequent connection.

1 44. A computer program product for efficiently serving large objects in network computing  
2 environments which include network-attached storage ("NAS"), the computer program product  
3 embodied on one or more computer-readable media and comprising:

4 computer readable program code means for receiving a deployment request for a  
5 particular object;

6 computer readable program code means for deploying the particular object on the NAS;

7 computer readable program code means for creating a redirect link on one or more servers  
8 from which the particular object may be requested;

9 computer readable program code means for creating an object serving link on the one or  
10 more servers; and

11 computer readable program code means for delaying until run-time a decision on whether  
12 to serve the particular object directly from the NAS using the redirect link or through a selected  
13 one of the servers using the object serving link.